

## I CLAIM:

1. An angle measuring device for measuring an angular position of a stationary object with respect to an object which is rotatable around an axis of rotation, comprising:

5 a rotor, which is connected to said rotatable object, which rotates about an axis of rotation;

a stator comprising a scanning unit for scanning a graduation, which moves in relation to said scanning unit;

10 a coupler fastened to said stationary object so as to seat said stator on said stationary object that comprises a contact face which extends transversely with respect to said axis of rotation, wherein said coupler comprises a contact face that extends transversely with respect to said axis of rotation and engages said clamping face of said stationary object so that a clamping force is generated so as to fasten said coupler to said stationary object and wherein said coupler is fixed against relative  
15 rotation, but is radially and/or axially elastic.

2. The angular measuring device in accordance with claim 1, wherein said coupler is clamped against a circumferential face of said stationary object.

20 3. The angular measuring device in accordance with claim 2, wherein said coupler comprises an area which is radially spread against an inner face and an outer face of said stationary object.

25 4. The angular measuring device in accordance with claim 1, wherein said coupler comprises an area which is axially spread into a gap of said stationary object.

5. The angular measuring device in accordance with claim 1, wherein said coupler comprises:  
30 a base that is fastened on said stator; and  
a plurality of tongues formed on said base that clamp said coupler to

said stationary object.

6. The angular measuring device in accordance with claim 2, wherein said coupler comprises:

- 5                   a base that is fastened on said stator; and  
                  a plurality of tongues formed on said base that clamp said coupler to said stationary object.

7. The angular measuring device in accordance with claim 3, wherein  
10 said coupler comprises:

- a base that is fastened on said stator; and  
                  a plurality of tongues formed on said base that clamp said coupler to said stationary object.

8. The angular measuring device in accordance with claim 4, wherein  
15 said coupler comprises:

- a base that is fastened on said stator; and  
                  a plurality of tongues formed on said base that clamp said coupler to said stationary object.

20                   9. The angular measuring device in accordance with claim 5, wherein one of said plurality of tongues comprises a wave-shaped bend positioned between said base and a clamping place, where said one of said plurality of tongues clamps said coupler to said stationary object.

25                   10. The angular measuring device in accordance with claim 1, wherein said coupler comprises:

- two diametrically oppositely located tongues that are fastened to said stator;  
                  and  
30                   two further diametrically oppositely located tongues, which are offset by 90° with respect to said two diametrically oppositely located tongues that are fastened to

said stator, and wherein clamping takes place between said two further diametrically oppositely located tongues and said stationary object.

11. The angular measuring device in accordance with claim 2, wherein  
5 said coupler comprises:

two diametrically oppositely located tongues that are fastened to said stator;  
and

two further diametrically oppositely located tongues, which are offset by 90°  
with respect to said two diametrically oppositely located tongues that are fastened to  
10 said stator, and wherein clamping takes place between said two further diametrically  
oppositely located tongues and said stationary object.

12. The angular measuring device in accordance with claim 3, wherein  
said coupler comprises:

15 two diametrically oppositely located tongues that are fastened to said stator;  
and

two further diametrically oppositely located tongues, which are offset by 90°  
with respect to said two diametrically oppositely located tongues that are fastened to  
said stator, and wherein clamping takes place between said two further diametrically  
20 oppositely located tongues and said stationary object.

13. The angular measuring device in accordance with claim 4, wherein  
said coupler comprises:

25 two diametrically oppositely located tongues that are fastened to said stator;  
and

two further diametrically oppositely located tongues, which are offset by 90°  
with respect to said two diametrically oppositely located tongues that are fastened to  
said stator, and wherein clamping takes place between said two further diametrically  
oppositely located tongues and said stationary object.

30

14. The angular measuring device in accordance with claim 10, wherein

one of said two further diametrically oppositely located tongues comprises a section that is fastened on a ring.

15. The angular measuring device in accordance with claim 14, wherein  
5 said contact face is fastened on said ring.

16. The angular measuring device in accordance with claim 1, wherein  
said rotor is connected with said rotating object by an axially extending screw, and  
said clamping force takes place by axial displacement of said screw.

10

17. An angle measuring device for measuring an angular position of a  
stationary object with respect to an object which is rotatable around an axis of  
rotation, comprising:

a rotor which is connected to said rotatable object which rotates about  
15 an axis of rotation;

a stator comprising a scanning unit for scanning a graduation, which  
moves in relation to said scanning unit;

a coupler fastened to said stator so as to seat said stator on said  
stationary object that comprises a contact face which extends transversely with  
20 respect to said axis of rotation, wherein said coupler comprises a contact face that  
extends transversely with respect to said axis of rotation and engages said clamping  
face of said stationary object so that a clamping force is generated so as to fasten said  
coupler to said stator and wherein said coupler is fixed against relative rotation, but is  
radially and/or axially elastic.

25

18. The angular measuring device in accordance with claim 17, wherein  
said rotor is connected with said rotating object by an axially extending screw, and  
said clamping force takes place by axial displacement of said screw.

19. A method for mounting a stator of an angle measuring device,  
30 comprising a rotor rotating around an axis of rotation, on a stationary object, said

method comprising:

attaching a radially and/or axially compensating coupler to said stator of said angle measuring device;

5 axially moving said angle measuring device toward said stationary object, wherein a contact face, which extends transversely with respect to said axis of rotation about which a rotor rotates, of said coupler comes into contact with a contact face, which extends transversely with respect to said axis of rotation, of said stationary object;

10 supporting said contact face of said coupler on said contact face of said stationary object, wherein during said axially moving said angle measuring device toward said stationary object said contact face of said coupler is radially displaced until said contact face of said coupler is pushed against a further face of said stationary object and clamps said coupler in a manner fixed against relative rotation.

15 20. A method for mounting a stator of an angle measuring device, comprising a rotor rotating around an axis of rotation, on a stationary object, said method comprising:

attaching a radially and/or axially compensating coupler to said stator of said angle measuring device;

20 axially moving said angle measuring device toward said stationary object, wherein a contact face of said coupler comes into contact with a contact face of said stationary object;

supporting said contact face of said coupler on said contact face of said stationary object, wherein by said axially moving said angle measuring device toward  
25 said stationary object said coupler is clamped to said stationary object in a manner fixed against relative rotation.